

REMARKS / DISCUSSION OF ISSUES

Claims 1 – 6 and 8 – 10 are pending in the application. Claims 1, 4 and 8 are independent.

In the present response, claims 1, 3, 4, 6, 8 and 10 are amended. The support for the claim amendments may be found in Applicants' specification, for example, page 6, lines 12 – 16. No new matter is added.

35 U.S.C. 112

Under 35 U.S.C. 112, second paragraph, the Office Action rejects claims 1 – 6 and 8 – 10, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

In the present response, claims 1, 3, 4, 6, 8 and 10 are amended to obviate this rejection. No new matter is added.

Withdrawal of the rejection of claims 1 – 6 and 8 – 10 under 35 U.S.C. 112, second paragraph, is respectfully requested.

35 U.S.C. 103

The Office Action rejects claims 1 – 6 and 8 – 10 under 35 U.S.C. 103(a) over Levy et al. (US Pub No. 2003/0021441 A1, hereinafter Levy), in view of Lofgren et al. (US 2002/0154144 A1, hereinafter Lofgren).

Applicants submit that for at least the following reasons, claims 1 – 6 and 8 – 10 are patentable over Levy and Lofgren, either singly or in combination.

For example, claim 1, in part, requires:

“if multiple second fingerprints are matched that meet a predefined proximity criterion with the first fingerprint, calculating a digital watermark associated with the first data sequence and comparing the calculated digital watermark with watermarks respectively associated with the matched multiple second fingerprints' respectively associated second digital data sequences in order to establish an identity of the first digital data sequence; otherwise, the first fingerprint is established as unique.” (Emphasis added)

Although, Levy, paragraph [0054], discloses that in some implementations, a fingerprint is used to find a set of potential matches, Levy does not disclose any criteria for the set of potential matches. Specifically, Levy does not teach or suggest that the set of fingerprints meet a predefined proximity criterion, as claimed.

Applicants submit that neither Levy nor Lofgren discloses a step to calculate the first fingerprint and determine whether multiple second fingerprints are matched with the first fingerprint in order to make the decision of either performing the calculation and comparison of digital watermarks or establishing the uniqueness of the first fingerprint.

Levy, paragraph [0058], recites:

“Digital watermarking and fingerprinting techniques can be combined to provide an enhanced and efficient audio and/or video identification system. A digital watermark is embedded in an audio signal. The watermark preferably includes a unique identifier. The identifier can be used to narrow a search, e.g., by identifying a specific database, a library, or a set of records (e.g., audio recordings or metadata) associated with the identifier. For example, the identifier may identify a database containing songs from Record Label X, or songs that have recently been broadcast (e.g., the last 2-60 minutes). Or the identifier can uniquely identify a song, an album, an artist, etc. A fingerprint is then calculated from the audio signal and compared against the subset of songs determined by the watermark identifier.” (Emphasis added)

Therefore, in the watermarking and fingerprinting techniques disclosed by Levy, the watermark is first used to determine a subset of songs and then a fingerprint is calculated to identify the song. In contrast, the claimed invention requires first matching the fingerprints to determine a multiple fingerprints that meet a predefined proximity criterion and then calculating and matching the watermarks to identify the data sequence. Clearly, Levy teaches a different approach to identify the data sequence (watermarks followed by fingerprints) from that of the claimed invention (fingerprints followed by watermarks). Applicants submit that Lofgren does not teach or suggest the missing features in Levy as discussed above.

In view of at least the foregoing, Applicants submit that claim 1 is patentable over Levy and Lofgren, either singly or in combination.

Similarly, independent claim 4, in part, requires:

“and if multiple second fingerprints are matched that meet a predefined proximity criterion with the first fingerprint, calculating a digital watermark associated with the first data sequence and comparing the calculated digital watermark with watermarks respectively associated with the matched multiple second fingerprints’ respectively associated second digital data sequences in order to establish an identity of the first digital data sequence; otherwise, the first fingerprint is established as unique.”

Moreover, independent claim 8, in part, requires:

“if multiple second fingerprints are matched that meet a predefined proximity criterion with the first fingerprint, calculating a digital watermark associated with the first data sequence and comparing the calculated digital watermark with watermarks respectively associated with the matched multiple second fingerprints’ respectively associated second digital data sequences in order to provide information enabling identification of the first data sequence; otherwise, the first fingerprint is established as unique.”

Applicants essentially repeat the above arguments for claim 1 and apply them to claims 4 and 8, pointing out why claims 4 and 8 are also patentable over Levy and Lofgren. Claims 2, 3, 5, 6, 9 and 10 respectively depend from and inherit all the respective features of claims 1, 4 and 8. Thus, claims 2, 3, 5, 6, 9 and 10 are patentable for at least the reason that they respectively depend from claims 1, 4 and 8, with each dependent claim containing further distinguishing features.

Withdrawal of the rejection of claims 1 – 6 and 8 – 10 under 35 U.S.C. 103(a) is respectfully requested.

Conclusion

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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